

## **ABSTRACT**

*Given that natural environments play a critical role in children's development, health, and learning, designers and educational policy makers often neglect the inclusion of natural elements in outdoor play environments. Further research is required to compare the cognitive play opportunities of outdoor play environments on a smaller scale, including natural loose, natural fixed, manufactured fixed, and manufactured loose elements. Often neglected as an essential element to be included in outdoor play, this research focused on the cognitive play value of natural loose elements for young children.*

*A unique outdoor preschool was selected with grounds inclusive of diverse natural and manufactured, loose and fixed elements. In 12 observation sessions, 36 four or five year olds were coded for cognitive play behaviors and the elements interacted with during play. Supplementing the research with qualitative data, 21 children were interviewed about their play experiences in the outdoor preschool.*

*The behavior mapping indicated that almost half of children's interactions with natural loose elements were dramatic play, such as creating 'forts' with sticks. The observation and interview results suggested that compared to other elements, natural loose elements supported the most opportunities for constructive, exploratory, and dramatic play that children enjoyed. The mapping of children's interactions within the outdoor preschool illustrates the importance of including natural settings to provide natural loose props, such as sticks, dirt, sand, and logs to promote and stimulate a diverse spectrum of cognitive play.*

*Considering outdoor preschools as one of the most familiar playgrounds to young children, it is necessary to understand what type of experiences these environments provide for children's development. Keeping in mind that children are the main users of these environments, we can carefully design outdoor preschools based on their interests and preferences for particular spaces or features. This research recommends landscape architects and policy makers to incorporate natural loose elements in outdoor preschool as an economical and sustainable approach that also develops children's cognitive abilities in early stages of life.*